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FEDERAL COMMUNICATIONS COMMISSION  
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BEFORE THE  
**Federal Communications Commission**

WASHINGTON, D.C. 20554

In the Matter of )

Replacement of Part 90 by )  
Part 88 to Revise the Private )  
Land Mobile Radio Services and )  
Modify the Policies Governing )  
Them )

PR Docket No. 92-235

To: The Commission

COMMENTS  
OF  
THE COASTAL CORPORATION

THE COASTAL CORPORATION

Von J. Taylor  
Director of Corporate  
Telecommunications

Dated: May 28, 1993

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## TABLE OF CONTENTS

	<u>Page</u>
SUMMARY . . . . .	ii
I.    PRELIMINARY STATEMENT . . . . .	2
II.   COMMENTS . . . . .	5
A.    Radio Services and Coordination Issues . . .	5
B.    Effective Use Overlay . . . . .	7
C.    Frequency Efficiency Standards . . . . .	8
D.    Other Technical Standards . . . . .	11
III.  CONCLUSION . . . . .	13

**SUMMARY**

The Coastal Corporation supports consolidation of the several radio services, but it urges establishment of an additional "pool" for users that have common safety, operational, and environmental concerns, such as pipelines, electric power utilities, trucking companies, and forestry operations. Insufficient consideration has been given to channels in the band 25-50 MHz. Current operations employing assignments from this band should be protected against incompatible uses through extension of the Exclusive Use Overlay ("EUO") concept or other appropriate mechanism.

The EUO concept should be modified to accommodate systems with less than regularly-mandated mobile loading that are used, in part, to protect the public's safety and the environment. These systems include those employed to support pipeline operations. The EUO concept should also be extended to mobile-only systems.

Equipment transition and migration to narrowband channels must be revised so that entire mobile radio fleets are not prematurely obsoleted without any commensurate benefit. The final rule amendment must also include accommodations for rural users who require operations with

greater HAAT/ERP than proposed since application of the proposed rules on an across-the-board basis will be unnecessarily wasteful of financial resources, as well as the radio spectrum.

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**COMMENTS  
OF  
THE COASTAL CORPORATION**

The Coastal Corporation ("Coastal"), pursuant to Section 1.415 of the Rules and Regulations of the Federal Communications Commission ("Commission" or "FCC"), and the invitation extended in the Notice of Proposed Rule Making (Notice)<sup>1/</sup> that initiated the above-styled proceeding, hereby submits these Comments concerning the Commission's proposal to substantially revise the Private Land Mobile

**I. PRELIMINARY STATEMENT**


1. The Coastal Corporation is a Houston-based energy holding company. Coastal has consolidated assets of more than \$10 billion with subsidiary companies engaged in natural gas marketing, transmission, and storage, refining and marketing, oil and gas exploration and production, coal, chemicals, trucking and independent power production. The Coastal companies operate approximately 2700 radios which use frequency assignments directly affected by this Notice. Coastal also utilizes over 1800 radios operated on channels in the frequency bands below 72 MHz which may be indirectly affected by the proposed rule changes.

2. Coastal's radio systems between 72 MHz and 512 MHz are located in all but a few states within the Continental United States. Coastal employs approximately 200 base stations, an additional 200 fixed stations, 1200 mobiles and 1100 portable radios in all bands. Should the proposed rules be adopted, Coastal estimates that it will have to spend \$8.5 million for hardware and another \$0.5 million for engineering, installation, etc. to achieve like services by 1996.

3. If all of Coastal's systems were able to be replaced with SMR services, Coastal estimates that leased airtime and service fees would amount to \$2.4 million per year for like services. This does not include mobile and/or portable equipment costs which could be leased or purchased at a cost of approximately \$3 million.

4. Coastal uses these systems for personnel dispatch, oil and natural gas plant operation, man down safety systems, tanker and barge loading, and operational-fixed systems for process and pipeline measurement and control. Privately owned, operated, and maintained telecommunications systems allow for efficient day-to-day service and more timely restoration of critical services than could be provided if we were forced to rely entirely on telephone common carriers or other third party communications providers. Further, the Coastal Corporation is involved with industries which have unique operational characteristics such as critical time delay parameters, transmission of volatile substances, and expansive or remote operating territories which necessitate the use of internal communications systems.

5. Currently, a large portion of Coastal business, such as natural gas transmission groups, are facing extreme structural and regulatory changes (i.e., FERC Order 636).<sup>2/</sup> In order to accommodate these changes without compromising safety or the quality of service to its customers, Coastal





## II. COMMENTS

7. The Coastal Corporation's personnel have reviewed the Commission's Notice, and also spent considerable effort reviewing the technical capabilities of the radios now owned and operated by the subsidiaries. Based on their review, and upon careful consideration of its subsidiaries' day-to-day operational requirements, Coastal is pleased to submit the following comments.

### A. Radio Services and Coordination Issues

8. The Coastal Corporation believes there should be a grouping of licensees that have common safety and operational concerns. Our industry and others such as electric power utilities, trucking, forestry, etc. deal with human safety, and protection of the environment and public property.

9. Many of Coastal's subsidiaries operate under strict governmental regulations that require them to provide reliable communication systems to ensure those protections stated above. As proposed in Part 88, our industries would be grouped with taxicabs, tow trucks, private detectives, etc. This will increase the likelihood of system or

technical problems and necessitate that we interface with a diverse group of small system users. This will hinder our ability to provide essential systems for the protection of human life and the environment.

10. The consolidation of radio services will cause the frequency coordinators to duplicate efforts in trying to maintain data bases for their clients. This may result in numerous data bases with questionable integrity. In addition, the coordinators will be required to track considerably more channels than now. Currently, each radio service has very good knowledge of the frequency assignments within its respective pool.

11. There does not appear to be any reason why the Commission has proposed to combine the services with respect to channel allocations below 72 MHz. Such a consolidation will only allow for easier migration from the "restrictive" higher frequency bands. This is particularly true since there is no exclusivity mechanism proposed for low band systems.

12. Forcing the frequency coordinators to "vertically" load existing frequencies before recommending any of the newly created channels may increase the amount of

interference on a channel instead of providing relief from spectrum congestion.

**B. Effective Use Overlay**

13. The Coastal Corporation has many "ribbon" style systems due to the nature of right-of-way industries. We believe the Commission should reduce or eliminate the loading requirements for "rural" systems (currently proposed 20 mobiles) if a showing of special need is demonstrated. This change would allow a way to provide reliable wide area communication systems for pipeline companies and other similarly situated licensees.

14. As proposed in Part 88, no "Exclusive Use Overlay" (EUO) protection is offered for the channels below 72 MHz. The Coastal Corporation has a very large investment in lowband VHF (40-50 MHz) systems throughout the United States. This investment is equal to or greater than the investment in highband VHF and UHF. Without some means for limiting the sharing of the lowband channels, similar to the EUO proposal, the lowband spectrum may become the channels of choice, even with its inherent noise and skip problems, due to the increased efficiency and technical mandates placed on the channels in the 72-512 MHz bands. This

prospect has the potential of making our lowband systems unreliable, and therefore unusable, if even a few of the existing or new licensees migrate to the lowband channels.

15. "Mobile only" systems do not appear to be addressed in the Exclusive Use Overlay section of the Notice. The Coastal Corporation believes that mobile only systems should be included if they meet the loading criteria.

C. Frequency Efficiency Standards

16. The Coastal Corporation is very concerned about the proposed channel assignment standards. We believe that to comply with the first stage of the FCC's proposal to move toward narrowband technologies in the shared bands below 512 MHz by January 1, 1996 would entail considerably more effort (and finances) than the "screwdriver adjustment" of deviation that the FCC has suggested. While transmitter deviation can be reduced with most existing equipment, it is believed that the goals of the first stage cannot be obtained with existing receivers having "wide" front ends. The assignment and use of the newly-created adjacent channels would result in widespread interference to existing systems because their receivers will continue to receive

signals over the entire 30 kHz channel in the VHF band, or over the entire 25 kHz channel in the UHF band. Reduction of the receiver bandwidth requires much more than a "screwdriver adjustment." It requires, if even possible on

observation is based on our "real life" experience of adjacent channel interference on splinter frequencies at 154 MHz and 173 MHz.

19. There is no possibility of combining more than two 150-170 MHz adjacent channels together to meet the needs of wider bandwidth applications. Every third channel is dedicated to the "innovative use" pool which limits the combined bandwidth to 10 kHz. While the Notice purports to promote a vision for future radio uses, it minimizes contiguous channel assignments and places a cap on higher data rate applications (at 9.6 KBPS or less) for both mobile and fixed systems.

20. With equipment currently on the market, there is no product that can transition through the 1996 technical requirements and then evolve into the narrowband requirements of the 2004-2012 time frame, or even earlier if attempting to qualify to keep two channels. This places the Coastal Corporation in a position of two tiers of obsolescence within a six- to ten-year time frame. Although this may be a boon to radio manufacturers, it causes the end user extreme financial and operational problems. The life expectancy of mobile radios is at least 15 to 20 years. Our

subsidiaries operate in very cost effective modes with "operational tools" such as radios.

D. Other Technical Standards

21. Due to the fact that there was no text included in the proposed Part 88 regarding station records, we assume that there will be no additional regulatory requirements in





Coastal agrees that all three reasons listed above warrant investigation, but hard and fast rules regarding HAAT/ERP are not the most effective way of correcting the perceived problems. Systems used in rural areas are not being plagued by the same problems found in urban areas. The proposed rules will not work for the majority of systems used by Coastal. The radio systems used by our subsidiaries support, among other activities, long haul, right-of-way pipelines. These usually are located in rural areas. The power limitations in effect today provide reliable operations while minimizing the number of radio sites required. Proper use of high gain directional antennas allow for cost effective coverage of rural ribbon type systems. Accordingly, the limited coverage resulting from the implementation of the proposed rule changes would require additional transmitter locations. This would defeat the purpose of this proceeding because additional frequencies would be required to provide the same coverage area, not only for the extra sites, but also for channels commonly used to link the remote sites together for control capabilities. As a simple comparison, rural cellular systems are allowed 500 watts ERP with HAAT of 500 feet which is significantly greater than the power used within urban areas. Even at heights above average terrain of 1000 feet, cellular systems are still allowed approximately



100 watts ERP to provide good service to their subscribers. The proposed rules are extremely restrictive for the types of coverage we need in the energy business.

23. Coastal has developed mobile radio coverage comparisons using existing operational parameters versus the proposed limits in the Notice. The modeling method used for these studies is described in "Radio Propagation for Vehicular Communications" by Kenneth Bullington (IEEE Transactions on Vehicular Technology, Vol. VT-26, No. 4, November 1977). The results of these studies show significant reduction of coverage areas. This will result in added investment and added spectrum usage. Rural systems for right-of-way are not metropolitan cellular-like systems.

~~When compared to a less number of channels with wider bandwidth~~



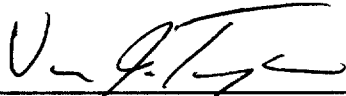
congested regions where the majority of our systems operate. Coastal has a great deal of financial and operational exposure if the Commission adopts the rule changes proposed in the Notice. Therefore, we urge the Commission to take our comments into consideration in its development of procedural and technical standards for the Private Land Mobile Radio Services.

**WHEREFORE, THE PREMISES CONSIDERED,** The Coastal Corporation respectfully submits the foregoing Comments and urges the Federal Communications Commission to act in a manner consistent with these views.

Respectfully submitted,

**THE COASTAL CORPORATION**

By:

  
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Von J. Taylor  
Director of Corporate  
Telecommunications

Dated: May 28, 1993